

**WHAT IS CLAIMED IS:**

1. A method for classifying a service class for transmission of packet data served in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising the steps of:

measuring a total number of packet data for a period of time associated with a classification of service class;

determining a parameter based on whether the measured number of packet data is larger than a threshold value associated with a two-way communication characteristic of the packet data transmission; and

calculating a value used to classify the service class of the packet data by using the parameter.

2. The method for classifying a service class as recited in claim 1, wherein the measuring step is implemented over a forward link and a reverse link.

3. The method for classifying a service class as recited in claim 1, wherein the measuring step further comprises:

measuring the total number of packet data transmitted over the forward link;

measuring the total number of packet data transmitted over the reverse link;

4. The method for classifying a service class as recited in claim 1, wherein the determining step further comprises:

determining that the service class is symmetric if each measured total number is larger than the threshold value; and

determining that the service class is asymmetric if it is not.

5. A method for classifying a service class for transmission of packet data in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising the steps of:

measuring a number of detected packet data;

dividing a jitter value by the measured number of packet data;

determining a parameter based on whether or not the divided value is larger than a threshold value associated with traffic characteristics of the packet data transmission; and

calculating a value to classify the service class of packet data by using the parameter.

6. The method for classifying a service class as recited in claim 5, wherein the steps of measuring and dividing are implemented over a forward link and a reverse link, respectively.

7. The method for classifying a service class as recited in claim 5, wherein the determining step further comprises:

determining that the service class has a short period if the divided value is smaller than the

threshold value; and

determining that the service class has a long period if it is not.

8. A method for classifying a service class for transmission of packet data in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising the steps of:

determining whether a first parameter associated with characteristics of the service class is symmetric or not;

determining whether a second parameter associated with a period of the service class is short or not; and

calculating a value to classify the service class of packet data by using the first and second parameters.

9. The method for classifying a service class as recited in claim 8, wherein the step of determining the first parameter further comprises the steps of:

measuring a total number of packet data for a period of time associated with the classification of service classes; and

determining the parameter based on whether the measured number of packet data is larger than a threshold value associated with characteristics of the service class.

10. The method for classifying a service class as recited in claim 9, wherein the measuring

step is implemented over a forward link and a reverse link.

11. The method for classifying a service class as recited in claim 8, wherein the step of determining the second parameter further comprising the steps of:

measuring a number of detected packet data;  
dividing a jitter value by the measured number of packet data; and  
determining the parameter based on whether or not the divided value is larger than a threshold value associated with the period of the service class.

12. The method for classifying a service class as recited in claim 11, wherein the steps of measuring and dividing are implemented over a forward link and a reverse link.

13. An apparatus for classifying a service class for transmission of packet data in a two-way communication network which supports transmission of packet data having various quality of service (QoS), the apparatus comprising:

means for controlling the operation of a base station controller (BSC);  
means for connecting a base transceiver system (BTS) to a gate way (GW);  
means for routing packet data traffic; and  
means for multiplexing and de-multiplexing packet data that is transmitted or received from a forward and reverse link.

14. An apparatus for classifying a service class for transmission of packet data being served in a two-way communication network which supports transmission of packet data having various quality of service (QoS), the apparatus comprising:

means for connecting a base transceiver system (BTS) to a base system controller (BSC);  
means for communicating with a mobile station;  
means for controlling the operation of the base transceiver system (BTS);  
means for determining paths of traffic, based on quality of service (QoS); and  
a plurality of channel cards located between said determining means and said communicating means.

15. A service class classifying apparatus for transmission of packet data served in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising:

a main processor for measuring a total number of packet data for a period of time associated with a classification of service class, and for determining a parameter based on whether the measured number of packet data is larger than a threshold value associated with a two-way communication characteristic of the packet data transmission, and for calculating a value used to classify the service class of the packet data by using the determined parameter; and

a switch for routing the packet data traffic.

16. The service class classifying apparatus as claimed in claim 15, further comprising a

selection and distribution unit (SDU) for synchronizing data streams from a plurality of links, and for transmitting the synchronized data stream to the switch.

17. The service class classifying apparatus as claimed in claim 15, further comprising a gate way (GW) for supporting transfer of protocol between different networks.

18. The service class classifying apparatus as claimed in claim 15, wherein said main processor measures the total number of packet data that is transmitted over one of a forward link and a reverse link.

19. The service class classifying apparatus as claimed in claim 15, wherein said main processor determines whether the service class is symmetric or asymmetric by measuring the total number of packet data.

20. A service class classifying apparatus for transmission of packet data in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising:

a main processor for measuring a number of detected packet data, dividing a jitter value by  
the measured number of packet data, determining a parameter based on whether or not the divided value is larger than a threshold value associated with traffic characteristics of the packet data

transmission, and calculating a value to classify the service class of the packet data by using the determined parameter; and

a switch for determining paths of traffic.

21. The service class classifying apparatus as claimed in claim 20, wherein the main processor measures the total number of packet data that is transmitted over one of a forward link and a reverse link.

22. The service class classifying apparatus as claimed in claim 20, wherein the main processor determines whether the service class has a short period if the divided value is smaller than the threshold value and determines that the service class has a long period if it is not.

23. The service class classifying apparatus as claimed in claim 20, further comprising a gate way (GW) for supporting transfer of protocol between different networks.

24. A service class classifying apparatus for transmission of packet data in a two-way communication network which supports transmission of packet data having various quality of service (QoS), comprising:

a main processor for determining whether a first parameter associated with characteristics of the service class is symmetric or not, and for determining whether a second parameter associated with a period of the service class is short or not, and for calculating a value to classify

the service class of packet data by using the first and second parameters.

25. The service class classifying apparatus as claimed in claim 24, wherein the main processor further measures a total number of packet data for a period of time associated with the classification of service classes, and determines the first parameter based on whether the measured number of packet data is larger than a threshold value associated with characteristics of the service class.

26. The service class classifying apparatus as claimed in claim 24, wherein the main processor further measures the total number of packet data that is transmitted over one of a forward link and a reverse link.

27. The service class classifying apparatus as claimed in claim 24, wherein the main processor further measures a number of detected packet data, and divides a jitter value by the measured number of packet data, and determines the second parameter based on whether or not the divided value is larger than a threshold value associated with the period of the service class.

28. The classifying service class apparatus as claimed in claim 24, wherein the main processor further measures the total number of packet data that is transmitted over one of over a forward link and a reverse link.